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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,106	02/28/2001	Koji Egashira	33082M072	8270

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EXAMINER

PERRIN, JOSEPH L

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 02/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/801,106

Applicant(s)

EGASHIRA ET AL.

Examiner

Joseph L. Perrin, Ph.D.

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-18 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-18 and 21-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- ☐ Interview Summary (PTO-413) Paper No(s). _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 23 October 2003 has been entered.

Response to Arguments

2. In view of applicant's amendment filed 23 October 2003, the status of the application is as follows:

Claims Objections

The objections of claims 22, 23, and 25 has been withdrawn in view of applicant's amendment thereby placing said claims in independent form.

35 U.S.C. §102 Rejections over Thompson

The rejection of claims 9-13, 15, 16, 18, 21, and 24 are maintained for at least the reasons set forth below.

Applicant's arguments, which appear to be substantially cumulative to those of the Response filed 02 April 2003, are still not persuasive. Applicant's minor amendments to the claims have not structurally differentiated the claimed invention from the prior art of record.

Re claim 10, applicant repeats the argument that Thompson "fails to inherently or explicitly disclose that the 'nozzle is formed so as to eject the processing liquid against each processing surface of the substrates so that a width of the plane-ejected processing liquid is generally equal to the diameter of the substrate on the processing surface'". This is still not persuasive because how the nozzle operates relative to movable items to be cleaned (e.g. a substrate of variable possible sizes) are not considered structural limitations of claimed apparatus and are considered intended use and given little patentable weight. Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). (emphasis in original)

Moreover, the position is taken that any nozzle confined in such a processing container as claimed by applicant would read on applicant's claimed nozzle since the ratio of spray width relative to substrate diameter is wholly dependent on the size of the substrate to be cleaned which can significantly vary. This is also related to intended use. Moreover, as cited in the previous Office

action, Thompson teaches that it is known to utilize fan-shaped nozzles (see, for instance, col. 6, lines 12-14), which are construed to be same of applicant's fan shaped nozzles, as further claimed in dependent claim 9. Applicant's argument of the number of nozzles of Thompson relative to the number of wafers to be processed is still not persuasive for at least reasons previously cited. Applicant's claims are directed to the apparatus, not the method of using the apparatus.

Re claim 11, applicant argues that the prior art does not show nozzles that are inclined. This is not persuasive because Thompson discloses inclined nozzles, for instance, in Figure 4. Moreover, since the inclination of the nozzles is dependent on placement of the wafers to be cleaned (e.g. intended use), this limitation is given little patentable weight.

Re claim 18, applicant argues that Thompson "fails to inherently or explicitly disclose 'an ejecting orifice formed on an inner face of the processing container so as to face the circular plate, for supplying a processing liquid to the circular plate's surface facing the inner surface of the processing container.'" This is not persuasive because Thompson discloses at least one ejecting orifice on an inner face of the processing container (see, for instance, Figures 1-4, nozzles 28/30 with ejecting orifices located on the inner surface of container 12). Moreover, as previously noted, applicant's claims language of "for ejecting a processing fluid..." (e.g. the operation of the apparatus during processing) is considered intended use and given little patentable weight. Claims directed to apparatus must be distinguished from the prior art in terms of structure rather

than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). (emphasis in original)

Re claim 21, applicant argues that Thompson "fails to disclose 'the ejecting orifices are located relative to the position of the substrates so that in plan view the ejecting orifices do not overlap with the substrates'". This is not persuasive because, as repeated from above, applicant is relying on intended use, *i.e.* how the ejecting orifices and substrates to be cleaned are located relative to each other when cleaning the substrates. Since the substrates may be oriented and positioned in multiple locations this limitation is given little patentable weight relative to the structure of the apparatus as claimed.

Re claim 24, applicant's arguments are not persuasive for at least reasons set forth above for claim 21.

35 U.S.C. §103(a) Rejections over Thompson and Thoms

The rejection of claims 14 & 17 are maintained for reasons set forth below.

Re dependent claims 14 & 17, applicant argues these claims are not obvious because claim 10 of which they depend is not anticipated or obvious. This is not persuasive because claim 10 is anticipated as noted above.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 9-13, 15-16, 18, and 21-25 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,022,419 to Thompson *et al.* (hereinafter "Thompson").

Thompson discloses a liquid processing apparatus with processing container 12 having an angled lower portion, nozzle 28 with a plurality of orifices (i.e. 9 as shown in Figure 3), wafer holder 26 built with circular holder 122, for holding a plurality of wafers (including one for each orifice, i.e. 9), the container (including wafers) being rotatable, the orifices being positioned obliquely relative to the central axis of the wafers, relatively inclined, arranged above the wafers, and capable of spraying in a plane, or fan-shaped (see entire reference of Thompson *et al.*, for instance, Figures 1-4, and col. 6, lines 12-14). It is noted that applicant's limitation directed to the substrates (*i.e.* work to be treated) is considered intended use and given little patentable weight. It has been held that the recitation that an element is capable of performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138. Moreover, MPEP 2115 and caselaw is replete with teachings disclosing that expressions relating an apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, "[i]nclusion of

material or article worked upon by a structure being claimed does not impart patentability to the claims." *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)).

Re claims 22, 23, and 25, Thompson discloses the claimed structure of applicant's claimed apparatus, namely, an apparatus with a processing container, a wafer holder with circular plate, and a nozzle with a plurality of orifices as cited above.

Re claims 22 and 23, applicant further includes "wherein" clauses claiming types of processing fluids. However, limitations of fluids usable in an apparatus is considered intended use and given little patentable weight. It has been held that the recitation that an element is capable of performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138. Moreover, MPEP 2115 and caselaw is replete with teachings disclosing that expressions relating an apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, "[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)).

Re claim 25, applicant further includes a "wherein" clause claiming the operation of the apparatus without any further structural limitation of the claimed apparatus. This is considered intended use and given little patentable weight. Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). (emphasis in original)

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson in view of Thoms (US 5,378,308).

As noted above, Thompson discloses the claimed invention with the exception of first and second alternatively-positioned nozzles. Thoms teaches that it is known to provide alternatively-positioned nozzles in a liquid processing apparatus for the purpose of improving the uniform distribution of a processing liquid (see, for instance, Figures 2-5, and col. 1, lines 48-51).

Therefore, the position is taken that a person of ordinary skill in the art at the time the invention was made would have been motivated to modify the apparatus, disclosed by Thompson, with the alternatively-positioned nozzles,

disclosed by Thoms, in order to improve the uniformed application of a processing liquid. The motivation for this combination is that it solves same problem of applicant (*i.e.* improvement of uniform application of processing liquid).

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson.

As noted above, Thompson discloses the claimed invention except for the inside nozzle passage having a rectangular sectional shape. It would have been obvious to utilize any sectional shape for the inside nozzle passage capable of providing adequate processing liquid flow, since such a modification would have involved a mere change in the form or shape of a component. A change in form or shape is generally recognized as being within the level of ordinary skill in the art. In re Dailey, 149 USPQ 47 (CCPA 1976).

Conclusion

8. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued


examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

9. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Perrin, Ph.D. whose telephone number is (571)272-1305. The examiner can normally be reached on M-F 7:00-4:30, except alternate Fridays.
11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571)272-1302. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.
12. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1700.

Joseph L. Perrin, Ph.D.
Examiner
Art Unit 1746

jlp


FRANKIE L. STINSON
PRIMARY EXAMINER
GROUP 3400-1700